

A NEW SPECIES OF PANDANUS (PANDANACEAE) FROM BINTUNI BAY, WEST PAPUA

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ABSTRACT

WIRIADINATA, H. 2009. A new species of *Pandanus* (*Pandanaceae*) from Bintuni Bay, West Papua. *Reinwardtia* 12(5): 443–446. — *Pandanus bintuniensis* Wiriadinata collected from Bintuni Bay, West Papua is described. It is very close to *P. permicron* Kanehira, but differs in wider leaf and brownish green coloured young leaf.

Key words: *Pandanus bintuniensis*, Bintuni Bay, West Papua.

ABSTRAK

WIRIADINATA, H. 2009. Satu jenis baru *Pandanus* (*Pandanaceae*) dari Teluk Bintuni, Papua Barat. *Reinwardtia* 12(5): 443–446. — *Pandanus bintuniensis* Wiriadinata berasal dari teluk Bintuni, Papua dipertelakan sebagai jenis baru. Jenis tersebut mirip dengan jenis *Pandanus permicron* Kanehira tetapi berbeda pada helaian daun yang lebih lebar dan berwarna hijau kecoklatan

Kata kunci: *Pandanus bintuniensis*, teluk Bintuni, Papua Barat.

INTRODUCTION

During a floristic survey of Bintuni Bay in August–September 2002, supported by URS, on an open area behind the coastal forest of near the mouth of Bintuni river a small population of attractive short stemmed *Pandanus* species was observed. In fact, a study of *Pandanus* in Papua is very limited (Merrill & Perry, 1939).

Several living plants of this species were collected and planted in Bogor. They grew well and after several years produced flowers and fruits. The female flowers similar to those of *P. permicron* Kanehira (Fig. 10, Kanehira, 1940) but further investigation reveal that they are different especially in wider leaf size which brownish green when young. Consequently it is proposed to describe it as a new species. It belongs to the section *Acrostigma* (Jebb, 1991).

Pandanus bintuniensis Wiriadinata *sp. nov.* — Fig. 2–9, 11.

Pandanus permicron Kanehira, lamina laterrimus, cephalia brevissimus, bractea et stigma differed. Typus: Bogor, introduced from Bintuni Bay, Tanah Merah, West Papua, 50 m asl., December 2005, *Harry Wiriadinata* HW 13274, cephalia (BO–Holo).

Perennial herb with very short stem, erect, without prop root nor aerial roots. Leaves tufted, developed gradually long, total number of leaves

are 27 when produce cephalia and male inflorescences, arranged spirally, dextrose, sessile, linear, tip acuminate, sharply aculeate with 1 mm long spines along margins and on part of the lower surface of the midrib, minutely spiny on the upper surface of the 2 lateral folds, glaucous, 30–60 x 3.5–5 cm; young leaves brownish green, mature leaves green or brownish green above the base, brown beneath. *Female inflorescence* terminal, peduncle erect *ca.* 10 cm long, young leaf upper bract *ca.* 19 x 3.5 cm, elliptic oblong, parallel nerves, spiny along margins and on midrib below, upper side spiny on the ridge of folded blades. Bracts boat-shape, yellowish white, 4 x 3 cm. Calyx thin, translucent. Cephalia rounded, 3–3.5 cm in diameter, contain *ca.* 92 drupes; drupes 12 mm long, 3 mm in diameter, pyramid shaped with 4 angular at base, white when in bud, green in young turning reddish orange, stigmatic beak shaped, acute. Seeds with thin aril, white, base acuminate, tip flat, 11 mm long, 0.5 mm diameter, white. *Male inflorescence* terminal, axis erect, poorly racemes 3 branches of 4.5 cm long and 1.5 cm in diameter; bract oblong, brownish green, acute, finely spiny along margins, *ca.* 6 x 2.5 cm; bracteoles 2, boat-shaped, concave, white, tip acuminate, 3–3.5 x 2 cm; pedicels 2 cm; stamens numerous, anthers 7 mm long, white, split longitudinal.

Distribution and habitat. Bintuni bay, southern part of West Papua. Lowland area very close to

Melaleuca leucadendra forest, of about 200 m to the beach; soil type of sandy soil and considered somewhat poor soil. Habitat is an open area of disturbed or secondary forest and its community consists of *Melaleuca leucadendra*, *Myristica fatua*, *Artocarpus elasticus*, *Vatica rassak*, *Flindersia amboinense*, *Galearia celebica*.



Fig. 1. Map of Papua. An arrow indicates *Tanah Merah*, Bintuni Bay

Notes. Observation on cultivated plant indicate that it would need almost 10 months or more from cutting to produce flower. Flower usually come in late December or January. The plant produces one type of sexual flower which appear at terminal branch. The male inflorescence branch could produce 3 bunches of staminate flowers after it

Pandanus bintuniensis in cultivation



Fig. 2. Plants before flowering, 10 months old

has produce 27 leaves, the stamens start to open around in the morning before sun rise, remain fresh for 1–2 days and the mush pollen is generally depleted in the 3rd day. The female inflorescence branch has 27 leaves and then produces female inflorescences; the young bud of cephalia usually hidden by sandy soil construct by ants. Some small ants covered the young cephalia with sandy soil at the opening of the bracts to protect them. The cephalia can emerge from the bracts within one week and remain fresh for 7–8 months. The colour of cephalia is dark green turning reddish orange in maturity.

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Fig. 3. Plants in flower, 1 year old

Female inflorescences

Fig. 4. Cephalia first week



Fig. 5. Cephalia second week



Fig. 6. Cephalia 1 month



Fig. 7. Cephalia 7-9 months

Male inflorescences

Fig. 8. The first day



Fig. 9. The third day

Fig. 10. *Pandanus permicron*Fig. 11. *Pandanus bintuniensis*